

Analysing skid marks

INTRODUCTORY LEVEL

STUDY TIME: 4 HOURS

Analysing skid marks

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Introduction

In the first course of this series you saw how some of the stages of a mathematical modelling process can be applied in the context of modelling pollution in the Great Lakes. In this second course you are asked to relate the stages of the mathematical modelling process to another practical example, this time modelling the skid marks caused by vehicle tyres. By considering the example you should be able to draw out and clarify your ideas of mathematical modelling.

This course, the second in a series of five, builds on the ideas introduced in *Modelling pollution in the Great Lakes*.

This OpenLearn course provides a sample of level 1 study in Mathematics.

Learning outcomes

After studying this course, you should be able to:

- create simple models, given a clear statement of the problem
- write down the simplifying assumptions that underpin a model
- identify the key variables and the parameters of a model
- apply the input–output principle to obtain a mathematical model, where appropriate
- obtain mathematical relationships between variables, based on or linking back to the simplifying assumptions.

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The main teaching text of this course is provided in the workbook below. The answers to the exercises that you'll find throughout the workbook are given in the answer book. You can access it by clicking on the link under the workbook.

Click the link below to open the workbook (PDF, 0.2 MB).

[workbook](#)

Click the link below to open the answerbook (PDF, 0.1 MB).

[answerbook](#)

Workbook contents

- Chapter 2: Analysing a model
 - 2.1 Skid marks
 - 2.2 Skid marks
 - End-of-section Exercises

Once you have completed this course, move on to the third of five units on mathematical modelling, *[Developing modelling skills](#)*.

Conclusion

This free course provided an introduction to studying Mathematics. It took you through a series of exercises designed to develop your approach to study and learning at a distance and helped to improve your confidence as an independent learner.

About this free course

This free course provides a sample of level 1 study in Mathematics:
www.open.ac.uk/courses/find/mathematics.

This version of the content may include video, images and interactive content that may not be optimised for your device.

You can experience this free course as it was originally designed on OpenLearn, the home of free learning from The Open University: www.open.edu/openlearn/science-maths-technology/mathematics-and-statistics/statistics/analysing-skid-marks/content-section-0.

There you'll also be able to track your progress via your activity record, which you can use to demonstrate your learning.

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978-1-4730-1387-2 (.kdl)
978-1-4730-0619-5 (.epub)

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